

 CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY AIR RESOURCES BOARD	KOMATSU LIMITED	EXECUTIVE ORDER U-R-005-0213 New Off-Road Compression-Ignition Engines
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Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2005	5KLXL15.2EC3	15.2	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Engine Control Module, Direct Diesel Injection, Turbocharger, Charge Air Cooler			Loader, Dozer, Generator and Other Industrial Equipment	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NO_x), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NO_x), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kw-hr)					OPACITY (%)		
			HC	NO _x	NMHC+NO _x	CO	PM	ACCEL	LUG	PEAK
225 ≤ kW < 450	Tier 2	STD	N/A	N/A	6.4	3.5	0.20	20	15	50
		CERT	--	--	6.0	0.5	0.16	8	3	18

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this 29TH day of November 2004.



Allen Lyons, Chief
Mobile Source Operations Division

ATTACHED TO 1061 LARGE ENGINE MODEL SUMMARY

04/6/3

U-R-005-0213

Manufacturer: KOMATSU LTD. Process Code: New Submission

EPA Engine Family: 5KLL15.2EC3 Manufacturer Family Name: SA6D140E-3

1.Engine Code 2.Engine Model 3.BHP@RPM (SAE Gross) 4.Fuel Rate: mm/stroke @ peak HP (for diesel only) 5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only) 6.Torque @ RPM (SEA Gross) 7.Fuel Rate: mm/stroke@peak torque 8.Fuel Rate: (lbs/hr)@peak torque 9.Emission Control Device Per SAE J1930

2C02	SA6D140E-3	560@1800	333	198	-----	-----	-----	DOZ EM,ECM 72,CA
2C01	SA6D140E-3	410@1800	242	144	1323@1400	271	121	EM,EC
2C03	SA6D140E-3	330@2100	183	127	1029@1400	216	100	EM,EC
2C04	SA6D140E-3	338@1900	200	126	1193@1250	251	104	EM,EC
2C07	SA6D140E-3	338@1800	213	128	1193@1350	265	119	EM,EC
2C10	SA6D140E-3	422@2100	229	158	1253@1500	260	128	EM,EC
2C12	SA6D140E-3	332@1900	190	121	1206@1250	247	103	EM,EC
2C13	SA6D140E-3	410@1800	242	144	1323@1400	271	121	EM,EC